Free sample from The Scooter Rider Skills, Safety & Commute Planner. This is worksheet 6 of 11. Get all 11 worksheets: scootermatch.com/kit

Route & Commute Planner

Range, hills, load and cost per mile for your real route, from this site's own calculators

Rider	**Date**
Route (from, to)	**Scooter**

Every table here was generated from this site's own range and hill-climb physics (the same functions the free calculators run), so the planner and the site never disagree. The tables use a 180 lb rider and a 35 lb scooter at 15 mph; put your own figures from the calculators in the right-hand boxes.

Your route

Item	Your number
One-way distance (mi)	
Round trip, plus any detour (mi)	
Steepest hill on the route (% grade)	
Rider plus bag (lb) and the scooter's max load (lb)	
Headroom: max load x 0.85 must be at least rider plus bag	
Charge at the far end? (yes or no)	
Coldest morning you will ride (F)	

Range check: real miles per charge, 180 lb rider at 15 mph

Battery	Flat, 77 F	Flat, 32 F	Hilly, 77 F	Comfortable one-way trip (80% rule)
281 Wh	13.9 mi	11.2 mi	9.7 mi	5.6 mi
360 Wh	17.9 mi	14.3 mi	12.5 mi	7.2 mi

Battery	Flat, 77 F	Flat, 32 F	Hilly, 77 F	Comfortable one-way trip (80% rule)
551 Wh	27.3 mi	21.9 mi	19.1 mi	10.9 mi
720 Wh	35.7 mi	28.6 mi	25.0 mi	14.3 mi

Plan the round trip at no more than 80 percent of real range, the same margin the site's range calculator uses. Box claims are usually measured with a 165 lb rider on flat ground at a low speed.

Hill check: speed held on rated power

Rated motor	5% grade, 180 lb	10% grade, 180 lb	15% grade, 180 lb	10% grade, 250 lb
350W	9.0 mph	5.4 mph	3.8 mph	4.1 mph
500W	12.0 mph	7.6 mph	5.4 mph	5.8 mph
800W	16.8 mph	11.5 mph	8.5 mph	9.1 mph
1000W	19.4 mph	13.9 mph	10.4 mph	11.2 mph

Below about 6 mph expect to kick-assist; below about 3 mph the scooter will not reliably make the hill. Short hills can use peak power, long ones cannot. Your own motor and weight: the hill climb calculator.

Cost per mile, for example

Mode	Site default figure	Cost per mile	Your figure
Electric scooter	18 Wh per mile, 85% charging, $0.17/kWh, 3 cents upkeep	3.4 cents	
Car, before parking	27 mpg at $3.40 gas, 10 cents a mile wear	22.6 cents	
Transit	$5.80 a day round trip on an 8 mile round trip	72.5 cents	

For example, results vary: on the site's commute calculator defaults, a 4 mile each-way commute costs about 26.9 cents a day by scooter against about $1.81 by car before parking, a gap of about $1.54 a day. Insurance, parking and depreciation are left out, so the real car figure is higher. Your own numbers go in the companion spreadsheet.

Route hazards and rules, from the recon ride

Where	Hazard or rule (pothole, blind corner, dismount zone, no sidewalk)	What you do there

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Commute kit this sheet assumes

Real listings from the site's own catalog, the same lock, light and mirror rows the site's intermediate commuter build uses.

- **Kryptonite Keeper 12mm U-lock**: Lock through the frame to something fixed at every stop out of sight.
- **SUYIWEE 1200 lumen front light**: For the week 11 dusk rides and every dark morning after.
- **Segway universal rear-view mirror**: A view behind without a long shoulder check in traffic.

Current prices and our latest picks for each item: **scootermatch.com/kit/scooter-rider-skills-safety-and-commute-planner/gear/**

Researched guidance, not professional advice. Wear a certified helmet every ride. Scooter laws differ by state and city: check yours.